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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,957	12/27/2001	Christopher C. Davis	1797.0360001	6050
26111	7590	05/19/2005	EXAMINER	
STERNE, KESSLER, GOLDSTEIN & FOX PLLC 1100 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			BELLO, AGUSTIN	
			ART UNIT	PAPER NUMBER
			2633	

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/018,957

Applicant(s)

DAVIS, CHRISTOPHER C.

Examiner

Agustin Bello

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “light sources” in claim 9 is used by the claim to mean “a modulator”, while the accepted meaning is “a producer of light.” The term is indefinite because the specification does not clearly redefine the term.

### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 1, 3-5, and 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyamori (U.S. Patent No. 6,278,537).

Regarding claims 1, 5, 9, Miyamori teaches a method for optical wireless communication, comprising the steps of receiving a source data signal (reference numeral S11 in Figure 3) having data; creating a set of temporally distinguishable transmission signals (e.g. S11 and S12 in Figure 3); converting (via reference numeral 106 in Figure 3) the set of temporally distinguishable transmission signals to obtain corresponding a set of temporally and optically distinguishable light signals, each light signal having a modulation representation of the data from the same data signal and a respective optical characteristic (e.g. the 90 degree phase difference between the two carrier signals created by the DQPSK modulation of the system, column 5 lines 26-34), and transmitting the set of temporally and optically distinguishable light signals in a single output transmission beam (reference numeral L01 in Figure 3) through a turbulent medium (e.g. air between reference numerals 106 and 151 in Figure 3) whereby, the set of light signals can pass through uncorrelated channels in a turbulent medium (reference numeral L01 in Figure 3).

Regarding claims 3 and 7, Miyamori teaches a set of delayed, diverse light signals (e.g. S11 and S12 in Figure 3), and wherein: said creating step comprises the steps of creating at least one duplicate of the source data signal (e.g. input to reference numeral 101 in Figure 3) and delaying the created duplicate signal (via reference numeral 101 in Figure 3) to obtain the set of temporally distinguishable transmission signals having a non-delayed transmission signal and at least one delayed transmission signal (e.g. S11 and S12 in Figure 3); and said converting step (via reference numeral 106 in Figure 3) comprises the step of generating a set of delayed, diverse light signals in response to the set of temporally distinguishable transmission signals, wherein the

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set of delayed, diverse light signals includes a first light signal corresponding to the non-delayed transmission signal and at least a second light signal corresponding to the at least one delayed transmission signal.

Regarding claims 4 and 8, Miyamori teaches receiving (reference numeral 151 in Figure 3) the single output transmission beam after it passes through the turbulent medium (reference numeral L01 in Figure 3), detecting temporally distinguishable light signals within the received single output transmission beam to obtain corresponding temporally distinguishable data signals (e.g. S15 and S16 in Figure 3); temporally adjusting each temporally distinguishable data signals obtained in said detecting step (reference numeral 156 in Figure 3); and logically evaluating bits (reference numeral 157 in Figure 3) in each of said temporally adjusted temporally distinguishable data signals to obtain a single output data signal (reference numeral S19 in Figure 3).

### ***Response to Arguments***

6. Applicant's arguments filed 3/2/05 have been fully considered but they are not persuasive. The reference cited by the examiner continues to read on the claimed invention. As noted in the office action, Miyamori's disclosure of DQPSK provides two optically distinguishable light signals. In this regard, the light emitting circuit of Miyamori is also capable of producing the combined signal of claim 9. In view of the above, the examiner maintains the rejection of the claimed invention based on Miyamori.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AB

  
**AGUSTIN BELLO**  
**PATENT EXAMINER**  
5/2/05